UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/780,375	02/12/2001	Christoph Hauger	00014	7035

7590 01/24/2006

Walter Ottesen
Patent Attorney
P.O. Box 4026
Gaithersburg, MD 20885-4026

EXAMINER	
FINEMAN, LEE A	

ART UNIT	PAPER NUMBER
2872	

DATE MAILED: 01/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/780,375	HAUGER ET AL.	
	Examiner	Art Unit	
	Lee Fineman	2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *16-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *16-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *2/12/01 & 10/6/03* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 21 October 2005 has been entered in which claims 1-4, 8, 9 and 12-15 are cancelled and claims 16-28 are added. Claims 16-28 are pending.

Claim Objections

2. Claim 28 is objected to because of the following informalities: The limitation "said reflection display" lacks antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 16-22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification fails to specifically identify the newly added limitations "said

recording device including an image mixer for receiving both said image data and said image of said object **as electronic image data** and for mixing said electronic image data therein" (claim 16) and "wherein said image projection module has an input for receiving said image data as electronic image data and said image mixer is connected directly to said input for receiving said image data as said electronic image data applied to said input." (claim 22). The applicant is now relying on this limitation as criticalness to the patentability. Nowhere in the specification is the image data detailed as electronic image data. Applicant cites fig. 6 as evidence of this limitation. However, neither this drawing nor the associated disclosure (page 7, line 29-page 8,line 6) specifies electronic data. Further, regarding the image projection module having an input and said image mixer being directly connected to said input, neither fig. 6 nor the specification details such an input. In fact, fig. 6 shows the connection/output for the image mixer being prior to the image projection module or any input thereof. As such, the examiner contends, absent specific support in the specification, that this subject matter was not considered within the metes and bounds of the invention as originally filed. The dependent claims inherit the deficiencies of the claim from which they depend.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 23 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Pensel et al., US 5,867,308.

Regarding claims 23 and 26, Pensel et al. discloses a surgical microscope (figs. 1-3) comprising a viewing unit (defined by 8, 14, and 18) for viewing an object (O) and defining a viewing beam path (figs.1-3); an image projection module (2 and 7) for inputting image data into the viewing unit (column 5, lines 26-28), including an image display unit (2) for displaying the image data; and said image projection module includes a beam splitter (10) mounted in said viewing beam path; an image recording module (19 and 26) for recording an image of said object supplied by said viewing unit and including an image sensor (26) mounted to receive said image data from said image projection module; an image recording beam splitter (see, e.g., 28, fig. 4 and column 7, lines 8-15) mounted in said viewing beam path for directing said image of the object onto said image sensor; a recording device (19) connected to said image sensor for recording said image data and said image of said object; and a device (24) for synchronizing the illumination of said image display unit with said image sensor (see column 5, lines 60-65).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 24, 25 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pensel et al in view of Mercado, US 5,969,803.

Regarding claims 24 and 27, Pensel et al. further discloses that the imaging optics (7) are mounted downstream of said image display unit (2) and are arranged between said image display unit (2) and said beam splitter (10). Pensel et al. disclose the claimed invention except for the specifics of the imaging optics for projecting the image, i.e., said image projection module including a first and second plano-convex lens, a plano-concave lens, and a concave-convex lens. Mercado teaches a projection lens assembly (fig. 1A) for a microscope with a first (L4) and second (L14) plano-convex lens, a plano-concave lens (L8 or L9), and a concave-convex lens (L10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the projection lens assembly of Mercado in the system of Pensel et al. to provide enhanced aberration correction (Mercado, column 3, line 6).

Regarding claim 25, Pensel et al. in view of Mercado disclose the claimed invention except for the ratio of said first focal length and said second focal length being within a range from 1.9 to 2.5. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have focal lengths within the claimed ratio, since it is been held that discovering an optimum value of a result effective variable involves only routine skill in the art. One would have been motivated to adjust the focal lengths for the purpose of adjusting the size/magnification of the projected image. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977) See also *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

9. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pensel et al. in view of Ernstoff et al., US 4,090,219.

Pensel et al. discloses the claimed invention except for the image display unit including a reflection display and wherein the brightness of said image display unit is increased by a time-dependent sequential illumination of the reflection display with only a single color. Ernstoff et al. teach in fig. 8, a reflection display (310, column 2, lines 57-58) illuminated sequentially with a single color as a function of time (in so far as the wheel can be stopped on a single color and, inherently, if more time is spent on a single color, it will be brighter than compared to a display exposed to sequential RGB illumination). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the reflection display of Ernstoff et al. as the display means in the system of Pensel et al. to be able to provide high resolution and high brightness full color images (Ernstoff, column 2, lines 24-26).

10. Claims 16, 19 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pensel et al. in view of Müller et al., US 5,657,128.

Pensel et al. discloses a surgical microscope (figs. 1-3) comprising a viewing unit (defined by 8, 14, and 18) for viewing an object (O) and defining a viewing beam path (figs.1-3); an image projection module (2 and 7) for inputting image data into the viewing unit (column 5, lines 26-28), including an image display unit (2) for displaying the image data; and said image projection module includes a beam splitter (10) mounted in said viewing beam path; an image recording module (19 and 26) for recording an image of said object supplied by said viewing unit and including an image sensor (26) mounted to receive said image data from said image projection module; an image recording beam splitter (see, e.g., 28, fig. 4 and column 7, lines 8-15) mounted in said viewing beam path for directing said image of the object onto said image

sensor; and a recording device (19) connected to said image sensor for recording said image data and said image of said object. Pensel et al. discloses the claimed except for said recording device including an image mixer for receiving both said image data and said image of said object as electronic image data and for mixing said electronic image data therein; and wherein said image projection module has an input for receiving said image data as electronic image data and said image mixer is connected directly to said input for receiving said image data as said electronic image data applied to said input. Müller et al. teach a surgical microscope (see figs. 1 and 2) including an image projection unit (25 and 31) and an image recording module (34 and 16). Müller et al. further teach that one can electronically combine the data with an image mixer (4) via inputs (figs. 1 and 3) for providing an electronic mixed image (see column 5, lines 8-20, the image data is electronic as evidenced by fig. 1, where the only connection to display 5 is a wire connection). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the images electronically with an image mixer as suggested by Müller et al. to be able to provide better alignment/registration of the images (Müller et al., column 3, line 66-column 4, line 6).

11. Claims 17, 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pensel et al. in view of Müller et al. as applied to claim 16 and further in view of Mercado.

Regarding claims 17 and 20, Pensel et al. in view of Müller et al. as applied to claim 16 further discloses (see Pensel) that the imaging optics (7) are mounted downstream of said image display unit (2) and are arranged between said image display unit (2) and said beam splitter (10). Pensel et al. in view of Müller et al. as applied to claim 16 disclose the claimed invention except

for the specifics of the imaging optics for projecting the image, i.e., said image projection module including a first and second plano-convex lens, a plano-concave lens, and a concave-convex lens. Mercado teaches a projection lens assembly (fig. 1A) for a microscope with a first (L4) and second (L14) plano-convex lens, a plano-concave lens (L8 or L9), and a concave-convex lens (L10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the projection lens assembly of Mercado in the system of Pensel et al. in view of Müller et al. to provide enhanced aberration correction (Mercado, column 3, line 6).

Regarding claim 25, Pensel et al. in view of in view of Müller et al. and Mercado as set forth above disclose the claimed invention except for the ratio of said first focal length and said second focal length being within a range from 1.9 to 2.5. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have focal lengths within the claimed ratio, since it is been held that discovering an optimum value of a result effective variable involves only routine skill in the art. One would have been motivated to adjust the focal lengths for the purpose of adjusting the size/magnification of the projected image. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977) See also *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

12. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pensel et al. in view of Müller et al. as applied to claim 16 and further in view of Ernstoff et al., US 4,090,219.

Pensel et al. in view of Müller et al. as applied to claim 16 discloses the claimed invention except for the image display unit including a reflection display and wherein the brightness of said image display unit is increased by a time-dependent sequential illumination of

the reflection display with only a single color. Ernstoff et al. teach in fig. 8, a reflection display (310, column 2, lines 57-58) illuminated sequentially with a single color as a function of time (in so far as the wheel can be stopped on a single color and, inherently, if more time is spent on a single color, it will be brighter than compared to a display exposed to sequential RGB illumination). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the reflection display of Ernstoff et al. as the display means in the system of Pensel et al. in view of Müller et al. to be able to provide high resolution and high brightness full color images (Ernstoff, column 2, lines 24-26).

Response to Arguments

13. Applicant's arguments with respect to claims 16-22 have been considered but are moot in view of the new ground(s) of rejection.

14. Applicant's arguments filed 21 October 2005 have been fully considered but they are not persuasive.

Applicant argues that the reference Zonneveld does not disclose the newly added claim limitations. However, the last rejection was made using Pensel et al. and it is the examiner's position that Pensel et al. still meets the claim limitations of claim 23.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lee Fineman whose telephone number is (571) 272-2313. The examiner can normally be reached on Monday - Friday 7:30 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LAF
January 17, 2006

MARK A. ROBINSON
PRIMARY EXAMINER